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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,606	12/17/2001	Hisanori Ehara	31711-177340	5904

Venable
P.O. Box 34385
Washington, DC 20043-9998

7590 11/24/2003

EXAMINER

SUMMONS, BARBARA

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/015,606		EHARA ET AL.	
	Examiner		Art Unit	
	Barbara Summons		2817	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-28 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 6 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The receipt of a substitute specification on 8/8/03 is acknowledged. The Examiner has approved the substitute specification has been approved for entry.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference signs "896" and "897" (see the sentence bridging pages 17 and 18 of the sub-specification through the first full paragraph of page 18) need to be labeled in Fig. 15. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC §§ 102 and 103

3. Applicants' amendment and arguments received 8/8/03 have overcome all prior rejections.

New Grounds of Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by UU et al. JP 3-297211 (of record).

Fig. 2 of UU et al. discloses a surface acoustic wave (SAW) duplexer comprising: a piezoelectric substrate 1; a transmitting filter 6 formed on the piezoelectric substrate 1; a receiving filter 7 formed on the piezoelectric substrate 1; a transmitting phase rotating line 5a which is an "inductor" L_t (see page 64, left column, lines 4-5) formed on the piezoelectric substrate 1; and a receiving phase-rotating line 5b which is an inductor L_r (see page 64, left column, lines 5-6), wherein the lines 5a and 5b are for an impedance adjustment (see the abstract, lines 1-5) that includes "phase rotating" as can be seen in the Smith charts in Fig. 4.

New Grounds of Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over UU et al. JP 3-297211 (of record) in view of Ikata U.S. 5,786,738 (of record).

UU et al. discloses the invention as discussed above, except for disclosing the transmitting and/or receiving phase rotating lines 5a/Lt and 5b/Lr having a length adjustable part.

Ikata et al. discloses that it is known to provide length adjustable parts of the transmitting and receiving phase rotating lines (see Fig. 7) in a SAW duplexer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the SAW duplexer of UU et al. (Fig. 2) such that the transmitting and/or receiving phase rotating lines (5a/Lt and 5b/Lr) would have had a length adjustable part such as taught, for example, by Ikata et al. (Fig. 7), because such an obvious modification would have provided the well known advantage of adjustability which Ikata et al. suggests is an art recognized need (see Fig. 7 and the discussion thereof).

8. Claims 7 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over UU et al. JP 3,297,211 (of record) in view of Kuroda U.S. 6,366,179 (of record).

UU et al. discloses the invention of a SAW duplexer as discussed above, but does not explicitly disclose it used in a communication device with an antenna and a power amplifier.

Kuroda discloses (Fig. 6) the known use and connections of a SAW duplexer 134 with an antenna 133 and a power amplifier 148 connected to the transmitting filter portion of the duplexer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the SAW duplexer of UU et al. (Fig. 2), if

even necessary, such that it would have been provided in a communication device with an antenna and a power amplifier, because such an obvious modification would have been merely a well known intended use of SAW duplexers as suggested by the exemplary teaching of Kuroda (Fig. 6).

9. Claims 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over UU et al. JP 3-297211 (of record) in view of Kuroda U.S. 6,366,179 (of record) as applied to claim 7 above, and further in view of Ikata et al. U.S. 5,786,738 (of record).

The UU et al./Kuroda combination discloses the invention as discussed above, except for disclosing the transmitting and/or receiving phase rotating lines 5a/Lt and 5b/Lr (UU et al. Fig. 2) having a length adjustable part.

Ikata et al. discloses that it is known to provide length adjustable parts of the transmitting and receiving phase rotating lines (see Fig. 7) in a SAW duplexer as discussed in the paragraph 7 rejection above.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the SAW duplexer/communication device of the UU et al./Kuroda combination such that the transmitting and/or receiving phase rotating lines (5a/Lt and 5b/Lr of UU et al. Fig. 2) would have had a length adjustable part such as taught, for example, by Ikata et al. (Fig. 7), for the same reasons given in the paragraph 7 rejection above.

Allowable Subject Matter

10. Claims 13-28 allowed.

11. Claims 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or fairly suggest a SAW duplexer or communication device using such a duplexer having each of the specifically recited features, and especially having transmitting and/or receiving "phase rotating" lines "formed with bonding wires" (see claims 6 and 12), or having transmitting and/or receiving "branching circuits" that include "a plurality of branching lines coupled in parallel with each other" (see each of the new independent claims 13, 17, 21 and 25).

Response to Arguments

13. Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

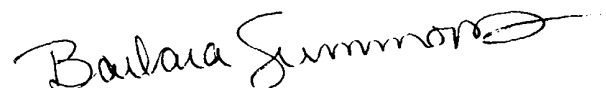
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Summons whose telephone number is (703) 308-4947. The examiner can normally be reached on M-Th, M-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on (703) 308-4909. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

bs
November 17, 2003



**BARBARA SUMMONS
PRIMARY EXAMINER**